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UNITED STATES DEPARTMENT OF AGRICULTURE
AGRICULTURAL RESEARCH ADMINISTRATION
BUREAU OF ENTOMOLOGY AND PLANT QUARANTINE
WASHINGTON 25, D. C.

In Cooperation with State, Federal and other Agencies

COTTON INSECT CONDITIONS FOR WEEK ENDING JUNE 15, 1946
(Third Cotton Insect Survey Report for 1946)

Weather was generally favorable for cotton but the scattered rains and mild temperatures were also favorable for the boll weevil. The weevils are abundant in many cotton fields in all of the Atlantic and Gulf Coast States from North Carolina to Texas, but thus far the cotton flea hopper has caused more actual damage to the cotton crops than any other insect. The serious flea hopper infestations are largely in Texas where many growers have been dusting with sulphur, mixtures of sulphur and calcium arsenate, and mixtures containing DDT.

The first cotton leafworm this season was collected near San Benito, Texas, on June 7. This is later than normal for their appearance in the United States, but there is still plenty of time for leafworms to cause damage. Grasshoppers have seriously damaged cotton and other crops in Caldwell and Hays Counties in south-central Texas, and poison bait is being used for their control.

The boll weevil situation is serious. There is danger of heavy damage. Farmers who have experienced losses from weevils during recent years should be prepared to apply calcium arsenate dust when needed.

BOLL WEEVIL

TEXAS: Plant examinations were continued in central Texas near Waco due to scarcity of squares. Weevils continued to strip the plants of most squares as fast as they were formed on early planted cotton. Twenty-nine fields were examined and weevils were found at the rate of 639 per acre as compared to 799 the previous week. The slight reduction in population was attributed to weevils being in squares, making them hard to find. The weevils are still concentrated on the older cotton in this area, which constitutes about 25% of the acreage. The younger cotton planted the latter part of May and early June will be vulnerable for weevil attack as the season progresses.

Weevil emergence from hibernation cages at Waco reached the peak during the week, bringing the total survival to 1.32% as of June 14. Emergence for the corresponding period in past years was 5% in 1945; 0.8% in 1944; 0.05% in 1943; 0.2% in 1942; and 14% in 1941.

Weevil infestation continued low in the Lower Rio Grande Valley, where all cotton plants were destroyed in August last year to check the pink bollworm. From 62 fields examined in Cameron County, only 47 were infested at an average rate of 9.8% as compared to 7.7% the previous week. From 7 fields in Hidalgo County, only 5 were infested at an average of 2.6% in squares, as compared to 4.4% the past week.

LOUISIANA: Weevils continue to increase in fields in northeast Louisiana near Tallulah. Plant examinations showed an average of 441 weevils per acre in this area as compared with 362 the preceding week. This is the highest record for the second week in June since these records were begun in 1933. The average of all records made during May and June was 359 weevils per acre. This is the highest weevil population for this period in the past 14 years except in 1934, when 439 weevils per acre were found. The older cotton is beginning to square and weevil egg punctures are numerous.

Weevils continued to emerge from hibernation cages. The total emergence on June 14 was 8.24% as compared to 7.36% the previous week.

MISSISSIPPI: Boll weevil infestations continue to increase. The State Plant Board and this Bureau examined 252 cotton fields in 42 counties. Weevils were found on 101 farms with an average of 185 weevils per acre in the infested fields, as compared with an average of 166 weevils per acre last week, and 182 per acre last year at this date.

In the southern Delta boll weevils were found in 21 of the 29 fields examined in Issaquena, Warren and Yazoo Counties, while just north of those Counties weevils were found in only 15 of the 71 fields examined in Holmes, Humphreys, Sharkey, and Washington Counties. Still further north in the Delta weevils were found in only 3 of the 72 fields examined in Bolivar, Coahoma, Leflore, Quitman, Sunflower, and Tallahatchie Counties.

The highest infestations in the State were found in Pearl River and Holmes Counties. No weevils were found in the 8 fields examined in Tishomingo, Prentiss and Itawamba Counties in the northeastern part of the State. The boll weevil situation is serious in the southern half of the State and also in Grenade, Montgomery, Yalobusha, Monroe, and several other counties. Farmers generally are urged to be prepared to dust with calcium arsenate.

GEORGIA: There was a slight decrease in infestation during the week on account of increased number of squares on the plants. The average infestation recorded in 22 fields in 8 counties in southwest Georgia was 24% punctured squares as compared to 27% the previous week. An examination of infested squares made on June 13, showed that 86% contained live weevil stages, of which 9.7% were pupae. The first generation of adult weevils should begin to emerge in a few days.

SOUTH CAROLINA: Examinations were made in 168 fields in 24 southern and eastern counties and 142 fields were infested at an average rate of 250 per acre.

NORTH CAROLINA: Boll weevils were found in 31 of the 57 fields examined in Cumberland, Greene, Harnett, Hoke, Johnston, Pitt, Robeson, Sampson, Scotland, Wayne and Wilson Counties. The weevils are numerous enough to become serious if conditions continue favorable for them.

COTTON LEAFWORM

THE first authentic record of the appearance of the cotton leafworm in the United States this season was a small worm collected by Louis M. Conn, of this Bureau, from the cotton of Oscar Thieme, 7 miles west of San Benito, Texas, on June 7, 1946. The specimen was sent to Washington and the determination verified by Carl Heinrich. The first leafworms usually make their appearance in Texas during April or May, but in 1945 they were not found until June 23. If conditions are favorable, the leafworms may become abundant enough to demand attention from the cotton growers during July, August, and September.

COTTON FLEA HOPPER

Thus far during 1946 the cotton flea hopper has probably caused more damage to cotton than any other insect. Most of the heavy flea hopper infestations have developed in southern and eastern Texas. Probably in no previous year have more growers protected their cotton from these insects than during the present season. Many farmers have dusted with sulphur, others have used mixtures of sulphur and calcium arsenate, especially where the boll weevil is also present; and for the first time large acreages have been dusted with DDT. M. E. Currie, Corpus Christi, Texas reported: "Flea hopper infestation increased considerably this week. About 1500 acres on the Chapman Ranch were dusted with sulphur and DDT by airplane. Other farmers have also been dusting, some by plane and others by tractor." D. J. Markwardt, Robstown, Texas, reported: "A considerable number of farmers are applying poison to their cotton to retard the flea hopper in the hope of setting a crop before the weevils get bad."

MISCELLANEOUS INSECTS

AUTOGRAPHHA sp.: The first authentic record of larvae of moths of the genus Autographa attacking cotton this season is based on specimens collected by M.E. Currie, of this Bureau, from cotton on Fred and Frank Crook's farm, 12 miles south of Corpus Christi, Texas, on June 6, 1946. The specimens were submitted to Washington and the determination made by Carl Heinrich. Several species belonging to the genus Autographa and closely related insects, including the cabbage looper, Trichoplusia ni (Hbn), at times cause serious damage by defoliating cotton. They are often mistaken for cotton leafworms. They are much more difficult to control by the use of arsenicals than the cotton leafworm. Farmers experiencing difficulty in checking what they think are cotton leafworms by the use of calcium arsenate or other arsenicals should send specimens of the insects to the Entomologist of their State Experiment Station, or to this Bureau for determination. These insects may be found in cotton fields in any state.

GRASSHOPPERS: In Caldwell and Hays Counties in south-central Texas grasshoppers are causing serious damage to clover, corn, and cotton. Farmers have been using poison bait to check them. An unusually heavy infestation of grasshoppers is also reported in central Texas, with spotted light damage to edges of cotton fields. Poison bait is being distributed for their control.

SALT MARSH CATERPILLARS: These insects destroyed several acres of cotton in the northern part of Martin County, Texas.

CUTWORMS: On one farm in McLennon County, Texas, 60% of the stand of cotton was destroyed on 35 acres and some cotton was destroyed on about 65 other acres.

GARDEN WEBWORM: This insect destroyed 150 acres of cotton on one farm in Falls County, Texas, and has caused considerable damage to cotton in several nearby counties.

COTTON APHIDS. were reported in small numbers in Louisiana and Mississippi.

June 19, 1946



